The Study of Financial and Legal Literacy of Individuals in the Emergence of Legal Behavior in the Organization

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Abstract

In the current era - the era of rights - legal literacy is recognized as one of the components of the power, ability and capability of citizens, and knowledge of the law is considered power. On the one hand, legal literacy makes citizens familiar with individual and group rights and is considered a necessary prelude to their demands, and on the other hand, by introducing the tasks to individuals, it makes the predictability of citizens' lives better. Although legal literacy is not explicitly mentioned in most of the current laws and regulations of the country, the general emphasis on the need to inform the people in some legal documents can be seen with a broad interpretation including the obligation to provide legal information and legal literacy education. It is necessary in the field of legislation by formulating a strong legal framework and in the field of implementation by providing formal and informal legal literacy education and also through cooperation with civil organizations active in this field, the field of achieving this right - especially for vulnerable groups such as women and the elderly - to be fully provided; Especially considering the fact that without the creation, development and deepening of legal literacy, the creation of a legal state and a modern state faces many difficulties. The article discusses the main approaches to the analysis of the financial literacy of the population as a factor of reasonable financial behavior. This is important for all countries, but especially for Russia, where entire generations were not familiar with financial instruments. The culture of financial behavior as an element of financial literacy has a significant impact on the financial behavior of citizens. However, it is extremely difficult to predetermine and, accordingly, predict the direction of this behavior. This is due to the fact that, on the one hand, existing attitudes are very stable and difficult to change. Changing behaviors takes a long time. On the other hand, the conditions for the functioning of the external financial environment are being transformed: atypical financial products are emerging that are innovative in nature for Russian society. In everyday life, when executing their own budget, the population stably adheres to the principles of behavior that have been established since Soviet times. At the same time, fundamentally new processes (stock markets, structural financial instruments, stock exchanges, investment instruments and others) arouse interest, against the background of a lack of deep thorough knowledge. If people are financially literate, they will be able to more effectively invest their funds by investing within their own national economy, because the savings of citizens are one of the main resources for its development.
Keywords: legal literacy, financial literacy, legal organizations, commercial banks, financial culture, financial behavior.

Introduction

Strategies for increasing the level of literacy of the population in the financial sector, both in the country as a whole and in its individual subjects, have certainly contributed to the development of the Russian economy. From our point of view, improving financial literacy should be reflected in improving the financial behavior of citizens. It is advisable to initially define the concept of "correct" financial behavior. There are points of view of various authors on this issue [1], [2], [3], [4].

Some of the authors believe that "correct" financial behavior is the correct execution of one's own budget [5], [6], [7]. Other authors consider this term as a timely repayment of debts [8], [9]. From our point of view, "correct" financial behavior is "reasonable" financial behavior, which consists in the competent fulfillment of the assumed monetary obligations, accumulation of insurance reserves (growth of deposits), investment within the medium or low level of risk.

For further study of financial literacy, it is necessary to highlight the most appropriate definition of this term, since there is no single one today. The team of authors proposes to consider the following variations. Financial literacy is the result of the financial education process, which is defined as a combination of awareness, knowledge, skills and behaviors necessary to make successful financial decisions and ultimately to achieve financial well-being [9]. There is a point of view that the digitalization of the economy affects the improvement of financial literacy, therefore the younger generation is more financially competent [10], [11], [12], [13]. In addition, the current conditions of the pandemic dictate the need to improve financial literacy [14], need to know and take into account the existing financial risks [15].

The concept of financial literacy was considered in the concept of the National Program for increasing the level of financial literacy of the population of the Russian Federation (2009) [16]. Financial literacy of the population is understood as the ability of Russian citizens to: effectively manage personal finances; keep track of household expenses and income and carry out short-term and long-term financial planning; optimize the ratio between savings and consumption; understand the specifics of various financial products and services (including securities market instruments and collective investments), have up-to-date information on the situation in the financial markets; make informed decisions about financial products and services and be consciously responsible for such decisions; competently plan and implement pension savings [16].

Having considered the different meanings of "financial literacy", we can conclude that financial literacy is the ability to analyze the flows of personal funds, to rationally manage a personal budget.

Based on the concepts discussed, three components of financial literacy can be observed.

Knowledge. Knowledge, in turn, means the mechanisms of the financial market, knowledge of basic financial terms, knowledge of the rights and obligations of both their own and financial organizations.

Skills. Skills are understood as the ability to apply fundamental knowledge in the field of finance, namely: to analyze the products offered by the financial market and make a rational choice of the one suitable for oneself, the ability to correctly read contracts and much more.

Installations. Attitudes are understood as the formation of a culture of competent financial behavior of the population, starting with the rational formation of the family budget.

These elements are the foundation of financial literacy and were highlighted in a study to determine the level of financial literacy in each region of the Russian Federation using a sociological survey of the population. The analytical center NAFI presented the results of this study, which was attended by 85,000 respondents throughout Russia [17], [18], [19].

To assess the level of financial knowledge, skills and attitudes of the population according to the methodology of the Organization for Economic Cooperation and Development (OECD), the Financial Literacy Index was used, which reflects a person's ability to reasonably manage personal finances. This indicator is measured in the range from 1 to 21 points. In 2019, the Russian Financial Literacy Index was 12.37 points. Compared to 2018, it grew by 2%.

Modern research shows that financially literate people are more efficient and successful in life, no matter in which country, in what positions and in what area they work. It is safe to say that knowledge of the basics of financial education improves the quality of life and positively affects the well-being of people. Therefore, teaching financial literacy concerns everyone personally.

Methods

The authors put the following hypothesis within the framework of the study - financial literacy improves the financial behavior of citizens. The research algorithm was as follows. In the first part of the study, the authors identified and assessed indicators for the study. At the first stage, we identified indicators that, in our opinion, characterize (describe) the financial behavior of citizens. The macroeconomic indicators of the country's economic development were highlighted.

In the second step, we determined in which direction these indicators should change (dynamics of change) in order to determine that financial behavior is "reasonable". At the same time, the following rules were set: 1) the factors characterizing the financial behavior of citizens have a high correlation with financial literacy; 2) the

factors that characterize the financial behavior of citizens are moving in a positive trend. What does positive dynamics mean? This means that these indicators change the way a reasonable (responsible) subject of financial relations behaves. For example, troubled debts are decreasing - that is, a decrease in the dynamics of troubled debts, an increase in citizens' savings, investment within the limits of low risk - that is, an increase in household deposits in banks. Also, the population should not be afraid to take loans from banks, therefore, an increase in household loans can be attributed to reasonable financial behavior.

At the next stage, for the objectivity of the study, the authors identified and fixed constant financial conditions for the development of macroeconomics. We must not forget that changes in financial behavior can be associated not only with low financial literacy, but also with a worsening economic situation in the country. Thus, an increase in citizens' savings, a decrease in problem debt, an increase in credit debt, may be associated with an improvement in the general state of the country's economy, which is characterized by the most important component - an increase in household income. It is well known that an increase in the income of the population affects the growth of savings and deposits of citizens, a decrease in the income of the population is reflected in the growth of debts, a decrease in savings, when poor citizens are forced to live in debt. In turn, the growth of incomes of the population is influenced by such macroeconomic indicators as inflation, exchange rate and other indicators. Therefore, at the third stage, the authors fixed the conditions that macroeconomic indicators are stable and do not change significantly.

In the second part of the study, the authors analyzed the results of the correlation of the selected indicators. At the third stage, conclusions were drawn about the viability of the hypothesis put forward.

In economic science, to describe economic phenomena and processes, economic and mathematical modeling is often used. To consider the prospects for the growth of the level of financial literacy of the population of the Russian Federation, the authors built an economic and mathematical model. The following are factors that the authors considered important to consider in this model:

– key rate,% (X1);
– dollar exchange rate of the Central Bank of the Russian Federation, rubles. (X2);
– minimum wage, rub. (X3);
– the average salary in the Russian Federation, rubles. (X4);
– the volume of funds (deposits) of individuals attracted by credit institutions (over 3 years), million rubles. (X5);
– inflation rate,% (X6);
– loans, deposits and other placed funds to individuals, RUB mln. (X7);
– unemployment rate,% (X8);
– debts of individuals on loans and other funds, million rubles. (X9);
– weighted average interest rates on loans to individuals (over 3 years),% (X10).

In accordance with the research algorithm described above, the factors describing the state of financial stability of the population (the level of wealth) should be neutral and stable with respect to the variable under study. These are the factors: the minimum wage, rubles. (X3); average wages in the Russian Federation, rub. (X4); inflation rate,% (X6); unemployment rate,% (X8); weighted average interest rates on loans to individuals (over 3 years),% (X10).

In accordance with the research algorithm described above, we will describe the expected dynamics of indicators characterizing positive financial behavior. Dynamics of the volume of funds (deposits) of individuals attracted by credit institutions (over 3 years), million rubles (X5) should increase. Dynamics of loans, deposits and other placed funds to individuals, million rubles (X7) should increase. Dynamics of individuals' debt on loans and other funds, million rubles (X9) should improve as rational financial behavior implies reliance on credit resources and the need to make large purchases. The dynamics of problem arrears should be decreasing - rational financial behavior presupposes prudence and responsibility in planning and executing one's own budget. The RF Financial Literacy Index was chosen as an indicator characterizing financial literacy. Table 1 presents the financial literacy index for the Russian Federation. These tables also show that the financial literacy index is growing. The table highlights the predicted values of the financial literacy index until 2023, which, in turn, have a positive trend.

Table 1
Financial literacy index and debt on loans

Years	Financial literacy index for the Russian Federation, score	Debt on loans to individuals, RUB mln .
2018	12,12	12035737
2019	12,37	14752662
2020	12,62	17489334
2021	12,87	19861850

| 2022 (forecast) | 13,12 | 21267505,15 |
| 2023 (forecast) | 13,37 | 23288752,77 |

Source: Rating of financial literacy of Russian regions 2019 [18], [19]

The data presented in Table 1 reflect the dynamics of the volume of debt on loans to individuals and the index of financial literacy of the population. It can be observed that the volume of debt is growing every year. The table highlights the predicted values (calculated using Microsoft Excel, using the FORECAST function) for the indicator under consideration until 01/01/2023. Based on the data in the table, it can be noted that the debt of individuals on loans and the financial literacy index are directly proportional, but this relationship is not logical. Logically speaking, with an increase in the level of financial literacy, the volume of problem debts should decrease, since the population knows how to competently manage their finances (they have knowledge, skills and financial planning skills, rationally use their funds), but this does not happen.

In order to identify the relationship between the level of financial literacy (Y) and a number of financial and mathematical indicators, the method of correlation and regression analysis was used. At the first stage, when building the model, data were collected on indicators that can affect the observed indicator - the level of financial literacy. The values were selected with a monthly step, and the observation period was 01.01.2017-01.12.2020. Correlation-regression analysis was carried out in Microsoft Excel. The second stage is correlation analysis. To determine the relationship between the indicators in the "Data Analysis" package, the CORRELATION analysis tool was chosen, which made it possible to investigate the relationship between the selected factors. To determine the strength of the relationship between indicators, the Chaddock scale was used. The communication level according to the scale values are as follows: absolute = 1; strong = [0.9; 1); high = [0.7-0.9); noticeable = [0.5-0.7); moderate = [0.3-0.5); weak = (0; 0.3); missing = 0.

The third stage is a regression analysis in order to establish a relationship between the observed variable - the level of financial literacy (Y), and the factors: key rate,% (X1); minimum wage, rubles. (X3); average wages in the Russian Federation, rubles. (X4); volume of funds (deposits) of individuals attracted by credit institutions (over 3 years), million rubles. (X5); loans, deposits and other placed funds to individuals, RUB mln. (X7); weighted average interest rates on loans to individuals (over 3 years),% (X10). Thus, in order to establish the relationship between the indicators in the "Data Analysis" package, the REGRESSION analysis tool was chosen.

According to the results of data processing, the R-square takes on the value 0.9553 or 95.53%. The parameter under consideration is also called the coefficient of determination. In this model, its value is close to 1, so we can conclude that the model perfectly describes the relationship between the observed variable (Y) and the factors under consideration (X1, X3, X4, X5, X7, X10). The correlation coefficient (Multiple R) shows the tightness the relationship of the dependent variable R - 0.9774, therefore, it can be argued that the relationship between the variables under consideration is close. The next indicator of regression statistics is the normalized R-squared (corrected coefficient of determination), which takes on a value of 0.9488.

The indicator is the standard error that shows the quality of the model: the lower the value, the higher the quality of the model. In the current regression analysis, the indicator takes the value 0.0551, which tells us about the high quality of the model. According to the results of the study, the following conclusions can be drawn: Fisher's criterion (Significance-F) takes a value of 4.77, which is much less than the tabular value - 0.05, and indicates the significance of the model.

To assess the statistical significance of the correlation coefficient, the Student's t test was used, the value of which should be greater than 2. For the current model, the indicator was calculated using the function STDISTRIBUTION, and the value was 2.013, which fits into the required interval. According to the study, the Y-intersection fits these parameters, the t-statistic value is 20.243. Also, these conditions fit the parameters of the minimum wage (X3) - 9.682, the volume of funds (deposits) of individuals attracted by credit institutions (over 3 years) (X5) - | -2.977 |, loans, deposits and other placed funds of individuals (X7) - 3.678. The remaining indicators - X1, X4, X10 are not suitable, since their values are below t stat. This regression can be considered intermediate.

The authors carried out a repeated regression analysis to establish the relationship between the selected indicators. On repeated studies, the R-squared value is 0.9531, which effectively describes the model. The correlation coefficient (Multiple R) shows the closeness of the relationship of the dependent variable R - 0.9762, therefore, it can be argued that the relationship between the variables under consideration is close. Another indicator of regression statistics is the normalized R-square (corrected coefficient of determination), which takes a value of 0.9499.

Next, consider the indicator - the standard error, which shows the quality of the model: the lower the value, the higher the quality of the model. In the repeated regression analysis, the indicator takes on a value of 0.0545, which tells us about the high quality of the model. Based on the reanalysis data, the following conclusions can be drawn: Fisher's criterion (Significance-F) takes a value of 3.13, which is less than the tabular value of 0.05,

and indicates that the model is significant. Student's coefficient takes on the value 2.013 (according to the previously calculated formula).

According to table 3.2.6. you can compare indicators that should take values greater than 2.013. The values of the Y-intersection and three variables (X3, X5, X7) are greater than the value of the Student's test, i.e. correlation coefficients are significant and informative for these factors.

Results And Discussion

According to the results of the correlation analysis, data were obtained, according to which the following conclusions can be drawn: the level of financial literacy has a strong connection with such indicators as the minimum wage - 0.9463; loans, deposits and other placed funds to individuals - 0.9138. The dependent variable (Y) has a high relationship with the following series of indicators: key rate - (-0.7935); the volume of funds (deposits) of individuals attracted by credit institutions (over 3 years) - 0.7074; weighted average interest rates on loans to individuals (over 3 years) - (-0.735).

The average salary in the Russian Federation takes the following value - 0.6900, the relationship according to the Chaddock scale is noticeable. The following indicators have a moderate and weak relationship with the observed variable, respectively, do not have a significant effect on it: debt of individuals on loans and other funds - (-0.4108); inflation rate - 0.1565; unemployment rate - (-0.1819).

In addition to the influence of these factors on the level of financial literacy, some of them are also related. For example, the key rate is highly correlated with the following indicators: the Central Bank of Russia dollar exchange rate - 0.8169, the minimum wage rate - (-0.8368), the average salary in the Russian Federation - (-0.7408); as well as a strong connection with indicators: loans, deposits and other placed funds of individuals - (-0.902) and weighted average interest rates on loans to individuals (over 3 years) –0.9677.

Based on the correlation-regression analysis, the authors predicted the level of financial literacy using Microsoft Excel. The following functions were used for forecasting: FORECAST, TREND, and COMBINED forecasting method. The forecast values were compiled before 01.01.2023, i.e. for two years. Figure 1 shows the dynamics and forecast of the level of financial literacy in the period 01.01.2017-01.01.2023.

Fig. 1 Dynamics and forecast of the level of financial literacy, points

The graph clearly shows that the level of financial literacy will grow and by 01.01.2023 its value will reach 12.95 points for the FORECAST and TREND functions, 12.96 points according to the COMBINED calculation, in which the equation $Y = 11.9168 + 0.00013 * X3 - 1.73E-06 * X5 + 2.99E-08 * X7$ was used. The deviation in the calculation is insignificant. Thus, the value of the level of financial literacy has a positive trend and in the period from 01.12.2020 to 01.01.2023 will increase by 4.44%.

Summary

At the beginning of the study, the following hypotheses were put forward: financial literacy improves the financial behavior of citizens; factors characterizing the financial behavior of citizens are highly correlated with financial literacy; the factors that characterize the "reasonable" financial behavior of citizens are moving in a positive trend.

According to the results of the correlation-regression analysis, the observed variable - the financial literacy index - is significantly influenced by the following factors: the minimum wage (X3), the amount of funds (deposits) of the population attracted by credit institutions (over 3 years) (X5), loans, deposits, etc. other allocated funds of the population (X7). Also, one of the factors in the analysis is the debt of individuals on loans and other funds, million rubles. (X9) - dropped out of the scope of consideration at the stage of the correlation

analysis, since the value of the correlation coefficient did not enter the required interval and amounted to - (-0.4108). However, arrears appear in the very title of the research work, for this reason, the authors considered it necessary to comment on the impact of this factor on the level of financial literacy. A negative value of this indicator indicates that the observed variable (Y) and factor (X9) are inversely related to each other, i.e. with an increase in the level of financial literacy, the volume of overdue debt will decrease, therefore, the use of measures to increase this indicator is necessary to reduce overdue debt in the loan portfolio.

In general, we can state that the hypothesis put forward at the beginning has justified itself. The connection between the selected indicators is high, the indicators change in accordance with the initially set hypothesis.

Conclusions

The level of financial literacy affects the financial behavior of citizens.

However, it is necessary to continue working towards further growth, since predicted values are positive.

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